WHAT IS CLAIMED IS:

1. A node for use in a wireless communication network, the node comprising:

a base mount configured to removably receive a position determination device and a tiltmeter;

at least one azimuth plate;

an optical receiver/transmitter pair mounted on the azimuth plate; and

a post, wherein the azimuth plate is rotatably mounted on the post and the post is configured to align the azimuth plate with the base mount.

2. The node of Claim 1, wherein the post includes a groove.

3. the node of Claim 2, wherein the groove is a V-groove, wherein the V-groove is configured to receive a set screw that aligns the azimuth plate to the post.

4. The node of Claim 1, further comprising a plurality of azimuth plates rotatably mounted on the post.

5. The node of Claim 1, wherein the post further comprises a conduit for transmitting signals to the transmitter/receiver pair.

6. The node of Claim 1, wherein the base mount precisely aligns the position determination device and tiltmeter to the post.

7. The node of Claim 1, wherein the base mount comprises a first mounting box with a keyhole configured to receive a portion of the position determination device.

8. The node of Claim 7, further comprising a second mounting box, wherein the first mounting box has two slots proximate the keyhole to receive guide pins, and the second mounting box has one slot proximate the keyhole to receive a single guide pin.

9. The node of Claim 1, further including a radome and a lid surrounding the optical receiver/transmitter pair.

10. The node of Claim 9, further comprising a tensioning screw and a spring configured to place the post in tension and the radome in compression.

11. The node of Claim 9, wherein the base mount includes an opening covered by a breathable patch.

12. The node of Claim 9 further containing a heater element to prevent condensation on the radome.

13. The node of Claim 1, wherein the azimuth plate further comprises an azimuth stepper motor to adjust the azimuth pointing direction of the receiver/transmitter pair.

14. The node of Claim 13, further including a constant tension spring to reduce backlash in the stepper motor.

15. The node of Claim 13 where the azimuth stepper motor is configured to provide at least 360 degrees of rotation to the transmitter/receiver pair.

16. The node of Claim 1, wherein the azimuth plate has an elevation stepper motor configured to adjust the elevation pointing direction of the receiver/transmitter pair.

17. The node of Claim 16, further including a constant tension spring to reduce backlash in the elevation stepper motor.

18. The node of Claim 16 where the azimuth stepper motor is configured to provide at least 20 degrees of elevation movement to the optical transmitter/receiver pair.

19. The node of Claim 1, further comprising a non-volatile memory device to store data that accounts for offsets in the actual pointing direction of the optical receiver/transmitter pair relative to a design pointing direction.

20. A system for positioning and aligning a receiver/transmitter pair in a communication node, with said node part of a wireless communication network, the system comprising:

a position determination device configured to determine the position and bearing of the positioning system;

a tiltmeter, configured to determine the pitch and roll orientation of the positioning system within the network;

a base mount configured to removably receive the position determination device and the tiltmeter;

at least one azimuth plate;

an optical receiver/transmitter pair mounted on the at least one azimuth plate; and

a post, coupled to the base mount and wherein the azimuth plate is rotatably mounted on the post ant the post is configured to align the azimuth plate with the base mount.

21. The system of Claim 20, wherein the position determination device comprises two GPS receivers.

22. The system of Claim 20, wherein the position determination device is a differential GPS (DGPS) receiver.

23. The system of Claim 22, wherein there are two DGPS receivers.

24. The system of Claim 20, wherein the tiltmeter is further configured to determine roll and pitch angles of the node.

25. The system of Claim 20, wherein the position determination device removably attaches to the base mount.

26. The system of Claim 20, wherein the tiltmeter removably attaches to the base mount.

27. The system of Claim 20, wherein the base mount comprises a first mounting plate and a second mounting plates, wherein the tiltmeter attaches to the first mounting plate.

28. A method of pointing a directional transmitter/receiver pair of a communication node in a wireless communications network, wherein the node comprises a base mount configured to removably receive at least one position determining device and a tiltmeter, an azimuth plate, a directional receiver/transmitter pair mounted on the azimuth plate, and a post, wherein the azimuth plate is rotatably mounted on the post and the post is configured to align the azimuth plate with the base mount, said method comprising:

determining tolerance offsets data for the node;

storing the offset data in a memory;

installing the node on a fixture;

determining the position and the bearing of the node using a position determination device installed on the node;

determining the pitch and roll of the node; and

pointing the optical transmitter receiver pair to a transceiver of another node using the offset data stored in the memory, the position, bearing, pitch and roll data.

29. The method of Claim 28, wherein the tolerance offset data accounts for machining and assembly variations in the base mount, azimuth plate and post.

30. The method of Claim 28, further including the step of removing the GPS receivers after the positional and bearing information is obtained.

31. The method of Claim 28, further including the step of removing the tiltmeter after the pitch and roll information is obtained.